

The diagram shows a horizontal rectangular chamber 100 of length L. A vertical inlet 7 with diameter d3 is at the top. A horizontal inlet 4 with diameter d2 and valve 6 enters from the left. A vertical outlet 2 is at the top right. Inside, a helical path 5 is shown with arrows indicating flow direction. A material stream Mb is shown exiting from the right end of the chamber. A coordinate system X is indicated at both ends of the chamber. A vertical dimension d is shown on the right.

A diagram of a circular device with a vertical stem. The stem is labeled '2' and has a downward-pointing arrow. The circular part consists of concentric rings. The outermost ring is labeled '1' and has a clockwise circular arrow. The inner ring has a counter-clockwise circular arrow.

FIG. 2 (a)

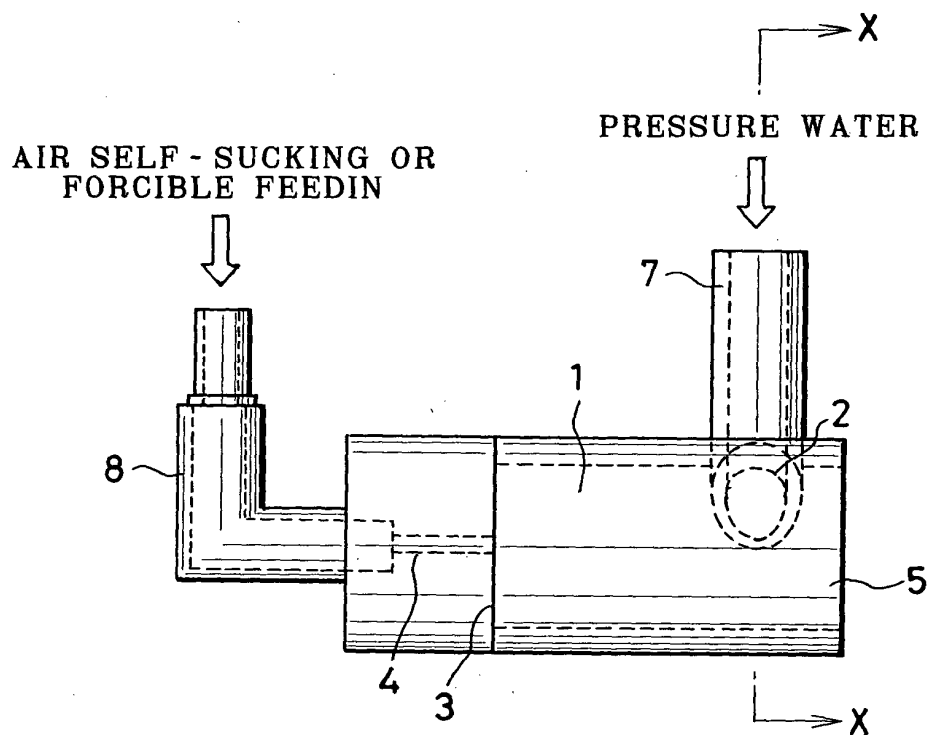


FIG. 2 (b)

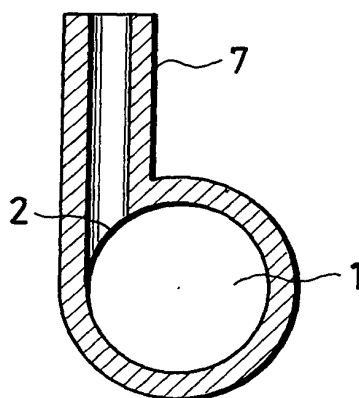


FIG. 3

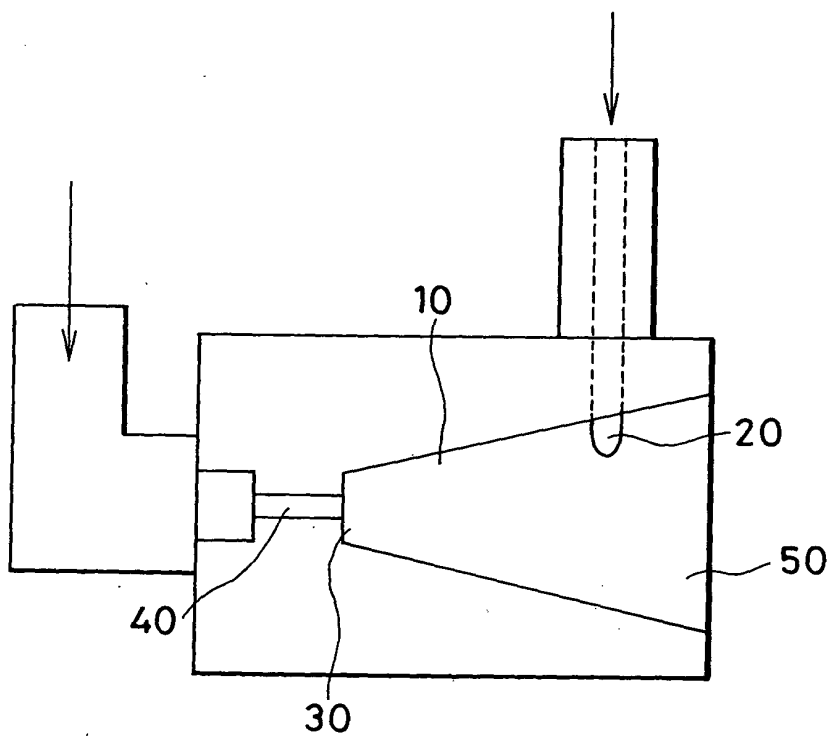
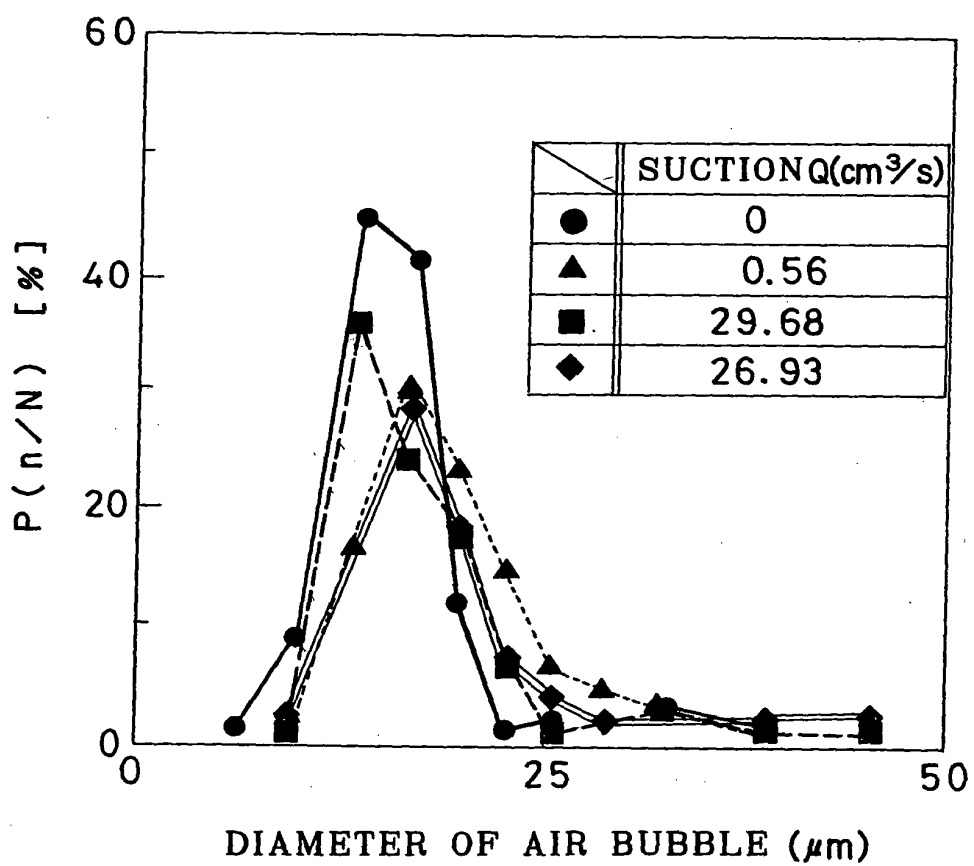


FIG. 4



A schematic diagram of a mechanical device, likely a reactor or separator, for processing a material stream. The device consists of a main rectangular chamber (1) with a central rotating shaft (4) and a helical mixing element (3). The shaft is driven by a motor (6) through a coupling (d2). The chamber is surrounded by a jacket (7) with a cooling or heating medium (d3). The chamber has a total length L and a diameter d1. The mixing element has a pitch d2. The material stream enters from the left and exits from the right through a vertical outlet (5) into a collection vessel (9). The outlet is located at a distance S from the right end of the chamber. The material stream is labeled Mb. The diagram also shows a cross-section of the chamber with a central vertical axis (X) and a horizontal axis (X).

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FIG. 6 (a)

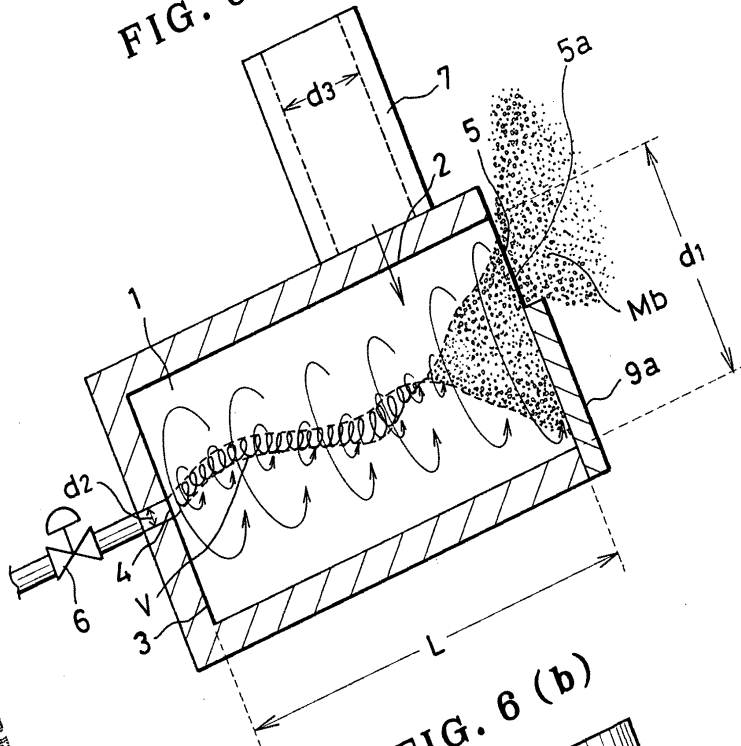
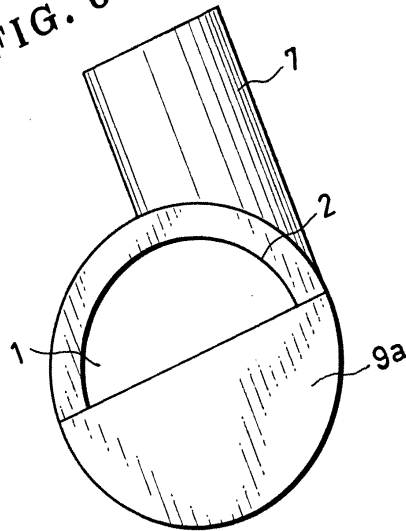


FIG. 6 (b)



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